

11	20	29	38	47	56
5' TGCAG ATT GGT TGG GGC AGC CCG GGG AGG CTG GCT CCG ACA CAC GAC TGA GTG TGC					
65	74	83	92	101	110
CTA CAC TGG TCC CAC AGG TTT TCA GCT GTG GAG TTT GGG ATC TGA GCT TGG AGC					
119	128	137	146	155	164
CCA TTT GTT TCT GGC AGT TCC GCT CAT ATT TTC CAC TTG AAG ACA TCG CCT CCC					
173	182	191	200	209	218
TTC CTT CCA AGC TGG GAG ACC AGA AGT CAA CAA CAG GAG GGT GGA GAG GCC GGG					
227	236	245	254	263	272
TCT CAC AAT CCG CTT GGC TGG GGA GTC CAC TGA GGT TCT TGC ATC CTG AAG CAA					
281	290	299	308	317	326
ACC ATG GAG AGC TGG TGG GGA CTT CCC TGT CTT GCG TTC CTG TGT TTT CTA ATG					
M E S W W G L P C L A F L C F L M					
335	344	353	362	371	380
CAC GCC CGA GGT CAA AGA GAC TTT GAT TTG GCA GAT GCC CTT GAT GAC CCT GAA					
H A R G Q R D F D L A D A L D D P E					
389	398	407	416	425	434
CCC ACC AAG AAG CCA AAC TCA GAT ATC TAC CCA AAG CCA AAA CCA CCT TAC TAC					
P T K K P N S D I Y P K P K P P Y Y					

FIGURE 1A

443	CCA CAG CCC	452	GAG AAT CCC	461	GAG GGT GGA AAT ATC	470	TAC CCA AGG CCA AAG CCA	488	
	P Q P E N P D S G G N I Y P R P K P								
497	CGC CCT CAA CCC	506	CAG CCT GGC AAT TCC	515	GGC AAC AGT GGA GGT TAC	524	GGT TAC TTC AAT GAT	542	
	R P Q P Q P P G N S G N S G G Y F N D								
551	GTG GAC CGT GAT GAC GGA CGC TAC CCG CCC	569	AGG CCC AGG CCA CGG CCG CCT GCA	578	AGG CCA CGG CCG CCT GCA	587	CGG CCG CCT GCA	596	
	V D R D D G D G R Y P P R P R P P A								
605	GGA GGT GGC GGC GGT GGC TAC TCC AGT TAT GGC AAC TCC GAC AAC ACG CAC GGA	614	GGC TAC TCC AGT TAT GGC AAC TCC GAC AAC ACG CAC GGA	623	AGT TAT GGC AAC TCC GAC AAC ACG CAC GGA	632	AGT TAT GGC AAC TCC GAC AAC ACG CAC GGA	641	650
	G G G G G G G Y S S S Y G N S D N T H G								
659	AGA GGG GGC TAT AGA CCC AAC TCT CGT TAT GGA AAT ACT TAT GGT GGA GAT CAC	668	TAT AGA CCC AAC TCT CGT TAT GGA AAT ACT TAT GGT GGA GAT CAC	677	TAT GGA AAT ACT TAT GGT GGA GAT CAC	686	TAT GGT GGA GAT CAC	695	704
	R G G G Y R P N N S R Y G N T Y G G D H								
713	CAT TCA ACG TAT GGC AAT CCA GAA GGC AAT ATG GTA GCA AAA ATC GTG TCT CCC	722	TAT GGC AAT CCA GAA GGC AAT ATG GTA GCA AAA ATC GTG TCT CCC	731	GGC AAT ATG GTA GCA AAA ATC GTG TCT CCC	740	ATC GTG TCT CCC	749	758
	H S T Y G N P E G N M V A K I V S P								
767	ATC GTA TCC GTG GTG GTG GTG ACA CTG CTG GGA GCA GCC AGT TAT TTC AAA	776	GTG GTG GTG GTG ACA CTG CTG GGA GCA GCC AGT TAT TTC AAA	785	CTG GGA GCA GCC AGT TAT TTC AAA	794	AGT TAT TTC AAA	803	812
	I V S V V V V V T L L G A A A S Y F K								

FIGURE 1B

821	CTA AAC AAT	830	AGG AGA AAT	839	TTC AGG ACC	848	CAT GAA CCA	857	GAA AAT GTC	866	TGA AGA
	L N N R R		N N C F R		T H E P E		N V				
875	TGT TAA GAT	884	CCC CTG ATT	893	TTG GGA AAA	902	ACA ACT AAA	911	ACA ACC GTG	920	TTT
929	ATC AAA AAA		AAA AAA								
			3'								

FIGURE 1C

1	MESWWGLPCLAF	LCFLMHARGQ	RDFDLADA	2297891		
1	MESWWGLPCLAF	LCFLMHARGQ	RDFDLADA	GI 2499136		
31	LDDPEPTKKPN	SDIYPKPKPP	YYPQPPENPD	2297891		
31	LDDPEPTKKPN	SDIYPKPKPP	YYPQPPENPD	GI 2499136		
61	SGGNIYP	RRPKPRPQP	QPGNSGGS	GGYFNDV	2297891	
61	SGGNIYP	RRPKPRPQP	QPGNSGGS	GGYFNDV	GI 2499136	
91	DRDDGRYP	PPRPPRPP	AGGGGGY	SSYGNS	2297891	
91	DRDDGRYP	PPRPPRPP	AGGGGGY	SSYGNS	GI 2499136	
121	DNTHGRGGY	RRPN	SRYGNTY	GGDHHSTY	GNP	2297891
121	DNTHG	-----	GGDHHSTY	GNP	GI 2499136	
151	EGNMVAK	IVSP	IVSVVV	TLLGAA	ASYFKL	2297891
136	EGNMVAK	IVSP	IVSVVV	TLLGAA	ASYFKL	GI 2499136
181	NNRRNC	FRTH	EPEN	V	2297891	
166	NNRRNC	FRTH	EPEN	V	GI 2499136	

FIGURE 2

11 5' GAGAG AAT AGC TAC AGA TTC TCC ATC CTC AGT CTT TGC AAG GCG ACA GCT GTG CCA 56
 20 47
 65 GCC GGG CTC TGG CAG GCT CCT GGC AGC ATG GCA GTG AAG CTT GGG ACC CTC CTG 110
 74 83
 119 128 137 146 155 164
 CTG GCC CTT GCC CTG GGC CTG GCC CAG CCA GCC TCT GCC CGC AAG CTG CTG
 L A L A L G L A Q P A S A R K L L
 173 182 191 200 209 218
 GTG TTT CTG CTG GAT GGT TTT CGC TCA GAC TAC ATC AGT GAT GAG GCG CTG GAG
 V F L L D G G F R S D Y I S D E A L E
 227 236 245 254 263 272
 TCA TTG CCT GGT TTC AAA GAG ATT GTG AGC AGG GGA GTA AAA GTG GAT TAC TTG
 S L P G G F K E I V S R G V K V D Y L
 281 290 299 308 317 326
 ACT CCA GAC TTC CCT AGT CTC TCG TAT CCC AAT TAT TAT ACC CTA ATG ACT GGC
 T P D F P S L S Y P N Y Y T L M T G
 335 344 353 362 371 380
 CGC CAT TGT GAA GTC CAT CAG ATG ATC GGC AAC TAC ATG TGG GAC CCC ACC ACC
 R H C E V H Q M I G N Y M W D P T T

FIGURE 3A

389	AAC AAG TCC	398	TTT GAC ATT	407	GGC GTC AAC	416	AAA GAC AGC	425	CTA ATG CCT	434	CTC TGG TGG
	N K S F D I G V N K D S L M P L W										
443	AAT GGA TCA	452	GAA CCT CTG	461	TGG GTC ACT	470	ACC AAG GCC	479	AAA AGG AAG	488	GTC TAC
	N G S E P L W V T L T K A K R K V Y										
497	ATG TAC TAC	506	TGG CCA GGC	515	TGT GAG GTT	524	GAG ATT CTG	533	GGT GTC AGA	542	CCC ACC TAC
	M Y Y W P G C E V E I L G V P T Y										
551	TGC CTA GAA	560	TAT AAA AAT	569	GTC CCA ACG	578	GAT ATC AAT	587	TTT GCC AAT	596	GCA GTC AGC
	C L E Y K N V P T D I N F A N A V S										
605	GAT GCT CTT	614	TTC TCC GAC	623	AAG AGT GGC	632	CGG GCC GAC	641	CTG GCA GCC	650	ATA TAC CAT
	D A L D S F K S G R A D L A A I Y H										
659	GAG CGC ATT	668	GAC GTG GAA	677	GGC CAC CAC	686	TAC GGG CCT	695	GCA TCT CCG	704	CAG AGG AAA
	E R I D V E G H H Y G P A S P Q R K										
713	GAT GCC CTC	722	AAG GCT GTA	731	GAC ACT GTC	740	CTG AAG TAC	749	ATG ACC AAG	758	TGG ATC CAG
	D A L K A V D T V L K K Y M T K W I Q										

FIGURE 3B

767	GAG CGG GGC CTG CAG GAC CGC CTG AAC GTC ATT ATT TTC TCG GAT CAC GGA ATG	776	785	794	803	812
	E R G L Q D R L N V I I F S D H G M					
821	ACC GAC ATT TTC TGG ATG GAC AAA GTG ATT GAG CTG AAT AAG TAC ATC AGC CTG	830	839	848	857	866
	T D I F W M D K V I E L N K Y I S L					
875	AAT GAC CTG CAG CAA GTG AAG GAC CGC GGG CCT GTT GTG AGC CTT TGG CCG GCC	884	893	902	911	920
	N D L Q Q V K D R G P V V S L W P A					
929	CCT GGG AAA CAC TCT GAG ATA TAT AAC AAA CTG AGC ACA GTG GAA CAC ATG ACT	938	947	956	965	974
	P G K H S E I Y N K L S T V E H M T					
983	GTC TAC GAG AAA GAA GCC ATC CCA AGC AGG TTC TAT TAC AAG AAA GGA AAG TTT	992	1001	1010	1019	1028
	V Y E K E A I P S R F Y Y K K G K F					
1037	GTC TCT CCT TTG ACT TTA GTG GCT GAT GAA GGC TGG TTC ATA ACT GAG AAT CGA	1046	1055	1064	1073	1082
	V S P L T L V A D E G W F I T E N R					
1091	GAG ATG CTT CCG TTT TGG ATG AAC AGC ACC GGC AGG CGG GAA GGT TGG CAG CGT	1100	1109	1118	1127	1136
	E M L P F W M N S T G R R E G W Q R					

FIGURE 3C

1145	1154	1163	1172	1181	1190
GGA TGG CAC GGC TAC GAC AAC GAG CTC ATG GAC ATG CGG GGC ATC TTC CTG ACT					
G W H G G Y D N E L M D M R G I F L T					
1199	1208	1217	1226	1235	1244
CTC GGA CCT GGT AGG CGA GGA AAT GAC CAG ATG CTC TCA GAC CCC ATT CCC AAG					
L G P G R G R G N D Q M L S D P I P K					
1253	1262	1271	1280	1289	1298
GAA GTG TCT CTA AGG GGC CCT ACG GGT GCC AGG AGA GGC TGC AGG GAT TTC CTC					
E V S L R G G P T G A R R G C R D F L					
1307	1316	1325	1334	1343	1352
ACA GAC CCT CTT TAT GAG CCA AGC AGA GCA AAC CCA GCC GGT CTC CAT GAA ACA					
T D P L Y E P S R A N P A G L H E T					
1361	1370	1379	1388	1397	1406
TCT TTT GCT GGC TTC CTT TCA AAT GCT TCT TGG GTT TGG CAA ATG TAG CCA AAT					
S F A G G F L S N A S W V W Q M					
1415	1424	1433			
ACT GTG CCG TGT AAA TTT TAA ATC CTG CAG CA 3'					

FIGURE 3D

27 L V F L L D G F R S D Y I S D - E A L E S L P G F K E I V S 2705267
 161 L L F S L D G F R A E Y L H T W G G L - - L P V I S K L K K GI 189650

 56 R G V K V D Y L T P D F P S L S Y P N Y Y T L M T G R H C E 2705267
 189 C G T Y T K N M R P V Y P T K T F P N H Y S I V T G L Y P E GI 189650

 86 V H Q M I G N Y M W D P T T N K S F D I G V N K D S L M P L 2705267
 219 S H G I I D N K M Y D P K M N A S F S L K - S K E K F N P E GI 189650

 116 W W N G S E P L W V T L T K A K R K V Y M Y Y W P G C E V E 2705267
 248 W Y K G - E P I W V T A K Y Q G L K S G T F F W P G S D V E GI 189650

 146 I L G V R P T Y C L E Y K N V P T D I N F A N A V S D A L D 2705267
 277 I N G I F P D I - - - Y K M Y N G S V P F E E R I L A V L Q GI 189650

 176 S F - - - K S G R A D L A A I Y H E R I D V E G H H Y G P A 2705267
 304 W L Q L P K D E R P H F Y T L Y L E P D S S G H S Y G P V GI 189650

 203 S P Q R K D A L K A V D T V L K Y M T K W I Q E R G L Q D R 2705267
 334 S S E V I K A L Q R V D G M V G M L M D G L K E L N L H R C GI 189650

FIGURE 4A

233	L	N	V	I	I	F	S	D	H	G	M	T	D	I	F	W	M	D	K	V	I	E	L	N	K	Y	I	S	L	N	2705267
364	L	N	L	I	L	I	S	D	H	G	M	E	Q	G	-	S	C	K	K	Y	I	Y	L	N	K	Y	-	-	L	G	GI 189650
263	D	L	Q	Q	V	K	D	R	-	G	P	V	V	S	L	W	P	A	-	-	P	G	K	H	-	-	-	-	S	2705267	
391	D	V	K	N	I	K	V	I	Y	G	P	A	A	R	L	R	P	S	D	V	P	D	K	Y	Y	S	F	N	Y	E	GI 189650
285	E	I	Y	N	K	L	S	T	V	E	-	-	-	H	M	T	V	Y	E	K	E	A	I	P	S	R	F	Y	Y	K	2705267
421	G	I	A	R	N	L	S	C	R	E	P	N	Q	H	F	K	P	Y	L	K	H	F	L	P	K	R	L	H	F	A	GI 189650
312	K	G	K	F	V	S	P	L	T	L	V	A	D	E	G	W	F	I	T	E	N	R	E	M	L	P	F	W	M	N	2705267
451	K	S	D	R	I	E	P	L	T	F	Y	L	D	P	Q	W	Q	L	A	-	-	-	-	-	-	-	-	-	L	N	GI 189650
342	S	T	G	R	R	E	G	W	Q	R	G	W	H	G	Y	D	N	E	L	M	D	M	R	G	I	F	L	T	L	G	2705267
472	P	S	E	R	K	Y	C	-	G	S	G	F	H	G	S	D	N	V	F	S	N	M	Q	A	L	F	V	G	Y	G	GI 189650
372	P	G	-	R	R	G	N	D	2705267																						
501	P	G	F	K	H	G	I	E	GI 189650																						

FIGURE 4B